Participatory Varietal Selection and Village Seed Banks for Self-Reliance: Lessons Learnt

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Background

Agriculture in India is over 5000 years old. Farmers have been into selective breeding and collecting enough seeds all these years to meet their planting requirement of the next crops. The very survival of Indian agriculture for centuries is a testimony to the sound wisdom on seed production and storage, the agrarian community has been nurturing over time. The past four decades have witnessed drastic changes in ways farmers manage their seed requirement. The decentralized seed production and distribution system practised over centuries by most of the farmers at village level has seen major reversal in terms of production and supply. With the advent of hybrid technology, the farmers are required to replenish seeds every season from external sources (such as research institutions, public and private sector seed producers) to harness the hybrid vigor. This has increased the productivity significantly, but at the same time, has increased farmers' dependence on external agencies. As a result, the once informal and decentralized village seed industry has now been almost replaced by a highly centralized seed markets. However, it is almost impossible for the organized seed sector to meet farmers' demand for the seed, considering the number of crops and varieties cultivated across the country. Thus, unscrupulous elements in the seed industry are active in supplying spurious seeds to gullible farmers causing heavy losses to the farmers and the country.

Many attempts are on to revive the age-old concept of seed self-sufficiency. In this context, the concept of 'seed village', which advocates village self-sufficiency in production and distribution of quality seeds, is fast gaining ground. Seed villages or village seed banks operate with utmost transparency, mutual trust and social responsibility of the seed-producing farmers towards seed-using fellow farmers, and under peer supervision. An attempt was made to promote the concept of village seed banks by the ICRISAT-led Watershed Consortium with the objective of ensuring quality seeds of improved/high yielding varieties for increasing productivity in farmers' fields and creating income-generating opportunities for better livelihoods to villagers. Successful community initiatives were first documented by an in-depth study of the seed villages at the Asian Development Bank (ADB) and Tata-ICRISAT sites of Vidisha and Guna districts, Madhya Pradesh, India. This provided the project with an insight into the concept and helped identify gaps so that the concept could be refined and implemented in Andhra Pradesh Rural Livelihoods Programme (APRLP) project sites in Andhra Pradesh, India.

Case Studies

Successful village seed banks operating in Guna and Vidisha districts, Madhya Pradesh, were visited to document the process and study the problems and prospects of the initiative. A checklist of questions was drafted to guide the discussions and information collection. The following questions were asked during the informal discussion with the farmers/women associated with village seed banks.

- What are the crops the seed bank deals with?
- What are the buying and selling prices?
- How is the selling price arrived at?
- What are the advantages for the farmer who buys seeds from the village seed bank?
- What are the costs involved in safe seed storage? seed treatment, storage infrastructure and handling?
- What assistance do farmers get from the project for seed bank?

- How seed quality is monitored?
- Whether germination tests done?
- What is the reaction of other farmers and family members towards this initiative?
- What are the future plans of the self help groups (SHGs)?
- What are the initiatives taken by the project implementing agency (PIA) to impart sustainability to the seed banks?

Village seed banks were first started in Lalatora watershed in the year 2000. Initially, four women SHGs – Lakshmi and Sharda groups in Shahpur village and Ganga and Yamuna groups in Tapra village – participated in the activity and procured 300 kg seed of chickpea variety ICCC 37.

Shahpur, ADB-funded Lalatora watershed, Vidisha District

Lakshmi Group (name of the SHG) started off basically as a thrift group. It has 11 women members. The group started procuring seeds of improved chickpea varieties (ICCC 37, ICCV 10, ICCV 2 and Kak 2) supplied by ICRISAT under the ADB project since 2000. The group first identifies the farmers who have sown the improved chickpea varieties. Upon harvest of the crop, the group approaches the identified farmers and offers to buy their produce at a premium of Rs 1.00 to 2.00 per kg over the prevailing market price.

In the first year, the group bought 300 kg seeds of improved chickpea varieties from farmers who had grown these varieties using breeder's seeds provided through the project. With the technical guidance of the project staff, the women graded the seeds and treated them with thiram 2.5 g per kg of seed. This costed the group, approximately Rs 20 per 100 kg seeds. The seeds were then stored in the government warehouse located about 15 km away from the village at a cost of Rs 20 per bag. Besides, they also had to pay Rs 10 per bag for transportation. When asked if they were considering any alternate options for storing the grains, the women said they had no place to store the seeds with adequate safety.

Chickpea grain price in the local market	Rs 15.00 kg^{-1}
Buying price of graded seeds of improved varieties	Rs 17.00 kg^{-1}
Seed treatment	Rs 0.20 kg^{-1}
Transportation	Rs 0.20 kg^{-1}
Storage rent	Rs 0.20 kg^{-1}
Total cost of seeds	Rs 17.70 kg^{-1}
Selling price	Rs 21.00 kg^{-1}
Margin of profit	Rs 3.30 kg^{-1}
Total profit the group earned during the first year	Rs 990.00

The group procured 400 kg seeds of improved chickpea varieties during 2001 and earned a net profit of Rs 1940 by selling the same in postrainy season 2002. The SHG procured 800 kg chickpea seeds in postrainy season 2002. As the volume of seed procurement is growing year after year, the SHG is considering increasing their monthly contribution from Rs 10 to Rs 50 at least for few months in a year to generate additional capital. At present, the group savings are to the tune of Rs 5600 and has received financial assistance of Rs 11,262 from the project as revolving fund for buying the seeds.

♣ 1US$=Indian Rs 43

When asked whether the farmers were ready to buy chickpea seeds from the group at Rs 21 when their price in the market was around Rs 17 to 18 a kg, the members quoted seed quality, seed reliability and seed availability at the farmers' doorsteps as the reasons for buying their seeds from the SHG at a premium price. It was indeed interesting to note when the prevailing notion is that the SHG would sell the seeds at a lower price than that quoted in the market. In fact, the SHG is earning this premium for the goodwill they have in their community. Selling seed and standing by its quality is indeed an asset and a worthy social capital.

Having gained confidence in dealing with chickpea seed, the SHG is considering procuring breeder's seeds of improved varieties of soybean, sorghum and coriander in the coming years. Besides, the group is also enthusiastic about taking other income-generating activities like dairy.

On the reaction of the male members of the families to the seed procurement initiative, the women said that they are getting a good deal of cooperation from them. Besides, they are encouraged to contribute higher amount of subscription to the thrift fund. The SHG members recalled that earlier they were not allowed to interact with outsiders, especially males. But things have changed drastically for the women SHGs in Shahpur ever since the seed business has gained ground. The women now come out freely and interact with the project personnel. Some of them have even traveled as far as Pune to undergo training in running the SHG. The women feel more confident and acknowledge that the seed bank has brought new enthusiasm to the SHG and empowered the women. They thankfully acknowledged the contribution of the Project to the SHG revolving fund (Table 1). The SHG members were willing to learn new technologies related to seed production and quality.

Table 1. Seed bank activity in ADB-funded Lalatora watershed development project at a glance.

Particulars	2000	2001	2002	2003	2004
Participating SHGs (no.)	4	2	3	3	2
Seed procured (kg)	1200	800	2210	2213	1618
Project loan (Rs)	19740	10920	37620	34008	21364
Group savings (Rs)	1860	2000	3000	3000	2000
Seed buying price (Rs per 100 kg)	1800	1615	1700	1600	1600
Seed selling price (Rs per 100 kg)	2100	2100	1900	1860	1800
Amount earned by SHGs from seed sale (Rs)	25200	16800	41990	34408	29124
Net profit to SHGs (Rs)	3600	3880	4180	3942	3036

Considering the success of the Lakshmi SHG, other thrift groups also showed keen interest in adopting the concept of "seed bank" as an income generating activity. However, the members of such groups could not be interviewed.

All the members (9) whom the project staff interviewed seemed to have come from small and marginal farm families. The project personnel confirmed that all the 11 members were from poor families.

Later, the male members of the families of women participating in seed activity were interviewed separately to elicit their reaction to the SHG activities. The males expressed full support to the good work being done by the women SHG and indicated that they were proud about the women's contribution to the farming in their village. Further, they opined that the seeds sold by the SHG were much superior in quality compared to what they used to buy from the market. The seeds, they said,

had good germination (over 90%) and gave high yield. They felt happy that they no longer required to wander markets for want of seeds. They were especially relieved, as there was no need to worry about spurious seeds.

The male members agreed that earlier their women did not dare to come out of their homes and talk to strangers. But now, they said, their women don't mind coming out and participating in such programs as it is benefiting farming community.

Kailashpura, Tata-ICRISAT-ICAR Watershed Project, Madhusudangadh, Guna District

Shrikrishna group, an all-male SHG, started procurement of seeds of improved chickpea varieties in summer 2003. The group has a membership of 9 farmers. They had collected 750 kg seeds of four chickpea varieties (ICCC 37, ICCV 2, ICCV 10 and Kak 2) during postrainy season 2003. The local market price was Rs 14 and they bought the graded seeds for Rs 15.50 a kg.

The group said that they had already spent Rs 595 on seed treatment, transportation and storage. The details as reported by group members are as follows:

Seed treatment	Rs 75 (Rs 0.10 kg^{-1})
Transportation	Rs 220 (Rs 0.30 kg^{-1})
Warehouse rent	Rs 300 (Rs 0.40 kg^{-1})
Total	Rs 595

The SHG strongly felt that a via media need to be worked out to save the cost on transportation and storage in order to increase their profit margin substantially. The cost of transportation was high, as the warehouse was located 17 km away in the block headquarters. Therefore, group members decided to store seeds in indigenous storage structures existing in their respective houses. The indigenous storage structure was a 6 feet long, 2 feet wide and 4 feet deep bin constructed with a mixture of soil and wheat straw and mounted over a raised wooden platform. The bottom of the bin was treated with spent (used) engine oil. The wheat straw absorbed excess moisture from the grains and the engine oil layer prevents moisture from entering into the bin.

The SHG ascertained high germination percentage at the time of procurement and sale. About 20 seeds were dibbled in the moistened soil spread around the drinking water pot. If more than 16 seeds germinated, then it was considered as good quality seeds. The SHG had plans to diversify their activities into procurement of seeds of improved varieties of soybean and sorghum, and taking up other income-generating activities.

Initiatives of the PIA

The PIA was taking several measures with the support from the consortium partners to make the seed bank venture of the SHGs economically viable and technically feasible so that their long-term sustainability was ensured. These measures were

- bringing in seeds of different crops and their varieties into the fold of the seed banks by distributing breeders/foundation seeds of sorghum, pigeonpea, soybean and pearl millet during rainy and, wheat and chickpea during postrainy seasons;

- negotiating with warehouses to provide storage space at a concessional rate;
- building linkages with financial institutions for enhancing buying power of SHGs;
- training SHGs in cleaning, grading and testing the quality of seeds;
- capacity building of SHGs in book keeping and accounting;
- elevating seed banks into agro service centers by encouraging them to trade in chemical and bio-fertilizers, bio-control agents, hand-operated agricultural implements; and
- encouraging custom hiring of tractors, sprayers, irrigation pumps and harvesters.

Up-scaling of Seed Village Concept in APRLP

The case studies provided a good deal of information and helped identification of gaps in the ongoing process of village seed bank maintenance. Though the communities were motivated enough to carry the process through, there were some operational bottlenecks in the process. The lessons learnt in this study were put to practice in the up-scaling of the village seed bank concept in APRLP. The main objectives of the up-scaling of seed village were as follows:

- addressing the seed village concept with science-based tools and with community participation;
- building the capacity of farmers and project staff in the production of pure and healthy seeds;
- incorporating previous learnings for up-scaling;
- developing site-specific seed production technology;
- identifying suitable seed production sites; and
- addressing seed health by managing pests and diseases during production and storage.

Initial consultation with the women self help groups.

Reconnaissance study

Before up-scaling the seed village concept in APRLP villages, a quick survey was undertaken in 2003 to assess the ground situation and ascertain the demand for seeds. Karivemula, a nucleus watershed village in Kurnool district was chosen as a pilot village for this purpose. Following is the summary of the outcome of the survey:

- Karivemula has a vibrant agricultural economy. The most important crop of this village is groundnut, which was grown in over 400 ha in every year. Other crops of significance were tomatoes (320 ha), cotton (200 ha), sunflower (160 ha), pearl millet (120 ha), sorghum (50 ha) and chilies (40 ha). Pearl millet, sorghum and pigeonpea were grown as intercrops with groundnut.
- Over 96% of farmers depended on external sources for groundnut seed.
- Awareness about improved varieties was dismal.
- Average groundnut pod yield of local non-descript varieties was 600 kg ha^{-1}.
- Over 95% of the cultivators owned small/medium sized landholdings.
- Majority of medium-scale landholders and almost all large holders procured seeds from their own produce while small-scale farmers heavily depended on external sources for seeds (Table 2).
- Most of the small-scale and medium-scale farmers expected government agencies for providing subsidies on seeds and other inputs such as fertilizers. As a result, they often ended up losing cropping season as distribution of seeds by government agencies was mostly delayed.

Table 2. Sources of seed in Karivemula village.

	Seed sources			Awareness about varieties	
Farmer status	Self	Market	Loan from other farmers[1]	Improved	Local
Small-scale farmer (<1ha)	30%	20%	50%	Nil	100%
Medium-scale farmers (1–5ha)	70%	8%	22%	Nil	100%
Big-scale farmers (>5ha)	100%	-	-	Nil	100%

1. Groundnut seed is taken on loan and repaid in kind (seed) in the ratio of 1:1.5

Productivity constraints

- Frequent droughts spells
- Low soil fertility
- Poor soil water conservation practices
- Low-yielding crop varieties
- Shortage of labor
- Poor extension services
- Uncertainties of prices and market problems
- Major cost of input was that of seed
- Poor credit facility and high interest rates by private money lenders

Farmers selected for seed production in a discussion with project scientists.

Based on the findings of the survey it was decided to organize a village seed bank on a pilot basis with groundnut. The participatory rural appraisal (PRA) and the rapid rural appraisal (RRA) also gave an insight into the areas that needed to be emphasized while mobilizing the groundnut farmers for setting up village seed bank. It was decided to approach the problem more holistically by taking into consideration the constraints the farmers were facing. Therefore special emphasis was given to

- selection of suitable crop variety;
- right spacing and seed rate including right seeding technique;
- seed treatment;
- nutrient management based on soil analysis;
- appropriate soil and moisture conservation measures;
- pest and disease surveillance and management;
- removal of rogues before harvesting main crop;
- right harvesting time, method and seed storage techniques; and
- avoid mixing different varieties while harvesting/threshing.

Capacity Building Strategy

In order to harness the synergy between the technology and the community participation, special emphasis was given to build farmers' capacity to produce quality groundnut seeds. A systematic program was chalked out with a sound logistic planning to attain the objectives.

A peripatetic training strategy was adopted for attaining maximum coverage in the given time. The program was carried out in a mission mode in three nucleus watershed villages each in Kurnool, Nalgonda and Mahabubnagar districts and four satellite villages around each nucleus village. In each nucleus watershed, two persons each from the PIA and the Watershed Development Team (WDT) besides 2–3 farmers each from the nucleus and satellite watersheds and the ICRISAT field staff were targeted for training. The method followed in Karivemula nucleus watershed village was repeated in all the nucleus watershed villages of APRLP-ICRISAT project sites. About 15-20 farmers were trained at each site, covering a total of 200 farmers over eight days.

The Process

The PIAs implementing the project identified potential farmers and project staff for the training course. The PIAs were assigned with the responsibility and liberty to make appropriate arrangements best suited to their conditions. The course consisted of technical details about the seed production. The trainees were exposed to details such as the characteristics of the varieties, isolation distance, purity of seeds, rouging of off-types and pest and disease management in the seed production plots and seed health and storage management. Posters and illustrations were used as teaching aids during the program. Important details that need to be kept in mind were detailed on a poster and displayed in the PIAs' office for ready reference after the training was over. On-farm training in identification and control of seed-borne diseases and pests was imparted to trainees.

Farmers with the help of the PIAs were encouraged to question the seed production process and formulate their own bylaws to enforce quality seed production among fellow farmers. At Mallepalli,

Nalgonda and Karivemula in Kurnool districts, PIAs have passed informal resolution for quality seed production in their villages. The process of farmers' capacity building was taken up in several steps as briefed hereunder.

Farmers' participatory selection of varieties and seed production

In rainy season 2002, the breeder's seeds of selected varieties were procured from various government research stations and ICRISAT, and provided to the interested farmers (Table 3). PIAs, village organizations (VOs) and farmers were involved in evaluating these varieties based on yield and other characters to take up on-farm trials for participatory evaluation and selection in comparison with their local varieties as control. Farmers had saved the seeds of ICGS 11, ICGS 76 and ICGV 86590 varieties and used these seeds for seed production in rainy season 2003 and also distributed the same on demand to other farmers of the village.

Table 3. Distribution of breeder's seed in watershed villages during rainy season 2003.

Watershed	*Ricinus communis* cv. Jyothi	*Ricinus communis* cv. Kranthi	*Cajanus cajan* cv. Asha	*Vigna radiata* cv. MGG 295	*Sorghum bicolor* cv. CSV 15	*Pennisetum glaucum* cvs. ICMV 221 and ICTP 8203	*Arachis hypogaea* cvs. ICGS 11, ICGS 76 and ICGV 86590
Nalgonda	900	850	1400	1450	550	400	-
Mahabubnagar	1000	1750	1850	285	850	0	-
Kurnool	220	310	1100	330	425	900	300
Total (kg)	2120	2910	4350	2065	1825	1300	300

Germination test for different groundnut varieties.

Monitoring seed production

During the seed production process, the PIAs, the VOs, the seed growers and the ICRISAT scientists jointly inspected the seed production plots. The farmers were assisted with appropriate technical guidance in different steps of seed production such as the identification of varietal characters, removing the off-types and management of the diseases and pests, harvesting and threshing, and finally in seed treatment and storage.

Seed health management

Guidelines were developed to help farmers understand and follow the steps in seed production in the selected crops. Following are the information capsules that were provided to farmers producing different crops.

Formation and management of village seed banks: The concept of village seed banks was initiated with great enthusiasm by the SHGs, the VOs and the PIAs in watershed villages. In general, the whole village adopted the concept with a lot of enthusiasm. The proposal for separate village committee for seed bank was successfully implemented by the PIAs. The secretaries of the VOs and the SHGs have become members of the village seed bank committee (VSBC) to take up the responsibility of seed production, procurement and storage. Resolutions were passed by the PIAs and committees to ensure the seed quality and redistribution of procured seed in the village.

Seed procurement: The farmers and seed committee members inspect the quality of the seed not only during seed production in the field but also at the time of procurement. A sample of the seed is kept aside from each seed lot and subjected to germination test before distribution. The seed committee and the farmers would decide the procurement price, which would usually be 5-10% above the market price. For instance, in Karivemula watershed village, the seed procurement price for different crops is given in Table 4. The committee, however, will decide the selling price in the next cropping season taking into consideration the market price of the seeds and grains. Thus, the committee ensures that the farmers get an incentive to sell and buy the seeds within the village.

Table 4. Seed procurement and selling price at Karivemula watershed seed bank.

Crop	Seed procurement price (Rs kg^{-1})	Grain price range in market (Rs kg^{-1})
Pearl Millet	5.50	4.50–5.00
Groundnut	17.50	15.80–16.80
Castor	15.00	13.00–14.00
Pigeonpea	17.50	14.50–16.00

Seed storage management: The village and the PIAs/SHGs are involved in selecting a proper place to store the seeds (Table 5). Normally a house with stone flooring and cement walls is selected for seed storage. The house is cleaned and whitewashed, sprayed with Malathion 2 mL/L on walls and floor. The seed bags are sun-dried for a couple of days and also sprayed with Malathion before filling with seed. The seeds of legumes are sun-dried and stored in clean gunny bags and fumigated with aluminum phosphide 3 g m^{-3} for 5–7 days.

Table 5. Village seed banks in operation.

District	Watershed	PIA	Crops and varieties	Seed procured (kg)
Nalgonda	Thirumalpuram	DAASM	Green gram (MGG 295)	1500
			Pearl millet (ICMV 221)	1000
	Gatikal		Green gram (MGG 295)	2000
	Patha suryapeta		Green gram (MGG 295)	1000
Kurnool	Karivemula	APPARD	Groundnut (ICGS 11)	1600
			ICGS 76	6300
			ICGV 86590	1200
			Pigeonpea (Asha)	900
			Castor (Kranti)	550
	KV Puram	RAIDS	Groundnut (ICGS 11)	1200
			Castor (Kranthi)	1400
			Pearl millet (ICTP 8203)	1000
			Pigeonpea (Asha)	1600

Seed treatment and distribution

Seed treatment: The VSBC takes-up seed treatment before distribution to farmers. This recommendation was based on the good results obtained from the farmer participatory on-farm research trials on seed treatment. Farmers realized that seed treatment is effective and economical for the management of seed and seedling diseases. The chemicals used for treating the seeds should be able to kill or control the seed-borne pathogen and protect the seeds from soil-borne pathogens without harming the host.

Seed distribution or marketing: Initially the villagers urged ICRISAT-led consortium to actively involve in procurement and distribution of the seeds produced by the VSBC. But, farmers were clarified of the role of ICRISAT-led consortium was only to provide technical backstopping. The VSBC members were counselled to play their role as village based institution that is capable of addressing seed related issues. The VSBC later appreciated the stand taken by the consortium and its role as an institution that builds capacity of community-based organisation to handle local development issues. The VSBC resolved to sell seeds only to farmers of their village. In case of seed surplus over the demand, it would be sold to individual growers of other villages at the same price as sold to the local farmers (Table 6). The selling price is usually less than the commercial market price and more than the procurement price. The difference in price is to cover expenses such as the premium paid to producers of seed, processing costs (salaries, wages, electricity, bags, chemicals, rent etc) cost of seed treatment, transport and cleaning losses, interest on the capital for purchase of seed.

Table 6. Effect of VSB role in distribution of improved groundnut varieties on yield and revenue of the Karivemula village.

Year	Area under cultivation by improved varieties (ha)	Total yield (kg)	Mean yield (kg ha^{-1})		% Increase in revenue over local variety
			Local variety	Improved variety	
2002	1.4	2800	1200	2000	60
2003	7.2	15840	1275	2200	67
2004	44	92400	1238	2100	69

Learnings

Up scaling of seed villages in APRLP-ICRISAT project sites was a very good learning opportunity for the project staff. They witnessed interesting discussions, questions and concerns from farmers on the viability of the seed village concept. They are summarized as follows:

- Particular efforts for maintaining isolation distance in rainy season as pigeonpea (often cross-pollinated) and castor (cross-pollinated) are grown in almost all the villages in Nalgonda and Mahabubnagar districts particularly by the small-scale farmers.

Trained women grade and treat seeds.

- No need to maintain isolations for groundnut and chickpea as they are self-pollinated crops.
- Seed production in postrainy season is acceptable but assured irrigation is a constraint.
- Low yield and high cost of cultivation for pigeonpea in postrainy season is a constraint specific to pigeonpea; but its seed production can be taken up in rainy season.

Advantages of seed village as perceived by farmers

- Availability of improved varieties in sufficient quantity within the village
- Assured and timely supply of seed
- Decentralized seed production
- Improved seed delivery system to resource-poor farmers
- Reduced dependence on external seed sources and hence an effective measure to curb spurious seed trade
- Encourages village level trade and improves village economy
- Social responsibility of seed production and delivery system
- A step ahead towards sustainable crop production
- Avoid introduction of diseases carried through seed (seed-borne pathogens) produced and imported from different agro-ecoregions
- Scope for farmers participatory varietal selection

Constraints

- Willingness of farmers to adopt quality seed production practices
- Additional investment for inputs in seed production
- Buy-back assurance to farmers from SHGs/NGOs
- Proper seed storage facilities and management in the village
- Availability of funds with SHGs/NGOs for seed procurement, seed packing, storage and transportation
- Fixing minimum support price for seed procurement
- Technical support for seed production and its monitoring
- Responsibility of quality control aspects
- Procurement of breeder's seed for seed production

Essential Precautions

- Proper selection of a variety in each crop suitable to each zone and reviving once in every four years the recent finding to see if better varieties are available.
- Maintaining maximum isolation distance in cross pollinated crops such as pigeonpea, castor etc.
- Careful removal of 'rogues' before flowering in cross-pollinated crops and separate harvesting in self and cross-pollinated crops (groundnut, chickpea etc.).
- Following of proper drying and storage methods suitable for each crop.

- Periodic checking for germination.
- Periodic replacement of seed by breeder's seed every four years.

Summary

Small and marginal farmers are often at a disadvantageous position in absorbing the agricultural technology related to genetic enhancement of production potential of agricultural crops. This is because of centralized production and distribution of improved seeds by a few private seed companies. Though the organized sector is able to produce a large quantity of seeds, the supply chain is unable to cope with the huge demand for seeds across the length and breadth of the country. Thus, the farming community depends to a large extent on external sources for important inputs such as seeds. Village seed banks provide an alternative to this problem and help farmers become self-reliant. This initiative needs both organized communities and scientific backstopping. Efforts towards up scaling seed banks in APRLP-ICRISAT program in the three districts resulted in encouraging learning outcomes and demonstrated the viability of village seed banks in villages with suitable technical backstopping and empowerment of the community members. The village seed banks not only ensure good quality seeds for enhancing productivity but also in generating income for the community members resulting in improved livelihoods.

News clippings on seed villages in Telugu newspapers.